



# ORD's Office of Science Policy RARE and RM Programs

## Factsheet

The Regional Applied Research (RARE) and Regional Methods (RM) Programs are mechanisms used by the Office of Research and Development (ORD) to respond to high-priority, near-term research and methods development needs of EPA's regional offices. Each year under RARE, ORD makes funds available to each EPA region to develop a research topic that is submitted to a specific ORD laboratory or center as an extramural research proposal. Joint participation by ORD researchers and regional staff throughout the process enhances communication and coordination between the Agency's research scientists and the users of that research in the EPA regional offices. In addition, the RM Program addresses environmental measurement problems identified by the regions as critical to their monitoring and enforcement activities. The Regional Science Liaisons (RSLs) to ORD facilitate the implementation of these programs in the regions, and they communicate the results of RARE and RM Program research to regional scientists and managers.

Developing a RARE project is a straightforward activity. Staff from the regional office develop a brief project description, articulating the issue to be pursued and the anticipated product. An intra-regional competition and selection process is managed by each RSL. Once endorsed by senior regional management, the project description is sent to an appropriate ORD laboratory or center Division Director, who determines if the project falls within the scope of the division and is consistent with the division's current objectives. The project is assigned to a "lead scientist" who, collaborating with expert staff in the regional office, develops a full research proposal and an extramural funding package. The proposal is submitted to the Office of Science Policy (OSP). Although the ORD laboratory or center division is responsible for all aspects of project management, OSP provides program oversight and fiduciary control. OSP has produced a Web-based training module for developing a RARE project, which can be found at <http://intranet.epa.gov/ospintra/regsci/rare.html>.

Research topics pursued under the RARE Program span the full spectrum of the environmental sciences. Many projects have addressed human health concerns, while others have focused specifically on the ecological effects of various pollutants. Because the RARE Program is designed to address near-term regional issues, most projects are conceptually designed to be completed within a 2-year time period. A complete list of RARE projects (including project descriptions and contacts) is available at <http://intranet.ord.epa.gov:9876/OSP/RARE.nsf>. Project-specific factsheets are being developed and also can be found at this Web site.

### RARE Example

*In the 1990s, Region 7's monitoring had indicated that pollution from charcoal kilns, previously exempted from Missouri's air pollution emission requirements, could significantly impact nearby residents.*

-Art Spratlin, Region 7, Director of the Air, RCRA and Toxics Division

For assistance, Region 7 utilized ORD's Regional Applied Research Program (RARE), which provides each region the opportunity to conduct high-priority research of its choosing through an ORD laboratory or center. In this case, a laboratory-scale charcoal kiln simulator was created to help characterize the chemical and physical properties of these emission plumes. Data from the simulator allowed Region 7 and Missouri to conclude that emission controls on charcoal kilns were necessary. Today, charcoal kiln operators are complying with the requirements to control and reduce these emissions. It is anticipated that by 2004, more than 1 million pounds of particulates and other toxic air pollutants will be eliminated from the Missouri Ozark Region.

Projects under the RM Program are limited to measurement-related problems that the regions face when implementing Agency programs and for which near-term solutions are needed. The regions are invited to identify their most critical methods problems, and priority is given to addressing those solutions that will have the widest applicability and/or greatest impact nationally. Project prioritization and nomination under the RM Program are done collectively by the Regional Science and Technology Directors, with regional laboratories and EPA's Biological Advisory Committee being two major contributors. As with the RARE Program, OSP provides program oversight and fiduciary control of the RM Program, and the RSLs serve as program contacts.

#### RM Example

*Excessive sedimentation is one of the primary sources of stream degradation in many EPA Regions. Even though sediments are one of the most common pollutants on impaired water body lists, the methods to quantitatively analyze and assess this property are lacking.*

—All EPA regions

Under ORD's Regional Methods (RM) Program, the regions requested that ORD develop an Excess Sediment Index. By using this information, regions will be able to quantitatively and more accurately measure the changes in stream channel morphology and sedimentation. In Region 3, this protocol has been used to investigate sedimentation problems related to streams impacted by both mountaintop/valley fill and longwall coal mining. By 2004, Region 10 will have more than 1,000 sites collecting quantitative physical habit data (including sedimentation) as part of its Regional Environmental Monitoring and Assessment Program.

For more information on the RARE and RM Programs, contact David Klauder, Regional Science Team Leader, at (202) 564-6496 or [klauder.david@epa.gov](mailto:klauder.david@epa.gov).